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Additional Information On  
Certain Aspects Of Independent  
And Hospital-Based Laboratories

B-164031(4)

*BY THE COMPTROLLER GENERAL  
OF THE UNITED STATES*

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AUG. 1, 1973



COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON, D.C. 20548

B-164031(4)

The Honorable James W. Symington  
House of Representatives

Dear Mr. Symington:

Your letter of August 28, 1972, asked us to answer nine questions about independent and hospital-based laboratories. Our December 20, 1972, report summarized information on six of the questions. We had previously responded to question 3, and, after some discussion with your staff, questions 7 and 9 were dropped.

This final report provides additional information obtained on questions 4, 5, 6, and 8. You selected 13 hospitals and 10 independent laboratories--in the metropolitan areas of Kansas City, Springfield, and St. Louis, Missouri--to be used as a basis for developing this information. We obtained information also on compensation arrangements between 4 pathologist groups and the 43 hospitals they serve. The report refers to the hospitals, laboratories, and pathologist groups by alphabetical key, not by name.

QUESTION 4--COMPARISON OF PRICES CHARGED BY  
HOSPITAL AND INDEPENDENT LABORATORIES

Your office had requested that we obtain cost data to compare costs between hospitals and independent laboratories. Because cost data on independent laboratories was not available to us, your office said a comparison of prices charged by independent laboratories with prices charged by nearby hospitals for the same test would be acceptable.

We obtained schedules of charges for laboratory services performed by the 13 hospitals and 9 of the 10 laboratories. One of the two laboratories in Springfield declined to give us a schedule of its charges because it did not bill the Medicare carrier--the paying agent in a particular area for

physicians' certain other medical services--directly for its services.

We did not use the schedule of charges obtained from the other independent laboratory in Springfield in our comparison because

- prices for 7 of the 18 tests we selected were not shown in the laboratory's schedule of charges and
- prices for 4 of the 11 tests for which prices were shown were higher than the Medicare prevailing charge<sup>1</sup> limits and did not appear representative.

As an alternative, we used the median customary charge<sup>1</sup> developed by the Medicare carrier for all independent laboratories in the Springfield area.

We compared the prices charged by independent laboratories for 18 common laboratory tests--which we selected with the assistance of the carrier's medical staff--with prices charged for similar tests by hospitals in the same area. The comparison showed that the prices charged by hospitals were higher on the average than those of laboratories, as follows.

<u>Metropolitan area</u>	<u>Percent hospital charges exceeded laboratory charges</u>
Kansas City	16
Springfield	10
St. Louis	23

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<sup>1</sup>Under Medicare, independent laboratories are generally paid on the basis of reasonable charges, and, in determining what is reasonable, carriers must consider what a particular laboratory customarily charges for the service and what other laboratories in the area charge for similar services.

B-164031(4)

For example, the differences in the charges by four hospitals and three independent laboratories in the St. Louis area for four of the tests follow.

<u>Test</u>	<u>Hospital charges (note a)</u>					<u>Independent laboratory charges</u>			
	<u>J</u>	<u>K</u>	<u>L</u>	<u>M</u>	<u>Aver-</u> <u>age</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Aver-</u> <u>age</u>
Blood sugar	\$ 5.00	\$3.00	\$5.00	\$4.00	\$4.25	\$5.00	\$3.00	\$3.50	\$3.83
Pap smear	10.00	6.00	5.00	5.00	6.50	5.00	5.00	5.00	5.00
Urinalysis	5.00	3.00	5.00	3.00	4.00	2.00	3.00	3.50	2.83
Sodium	5.00	4.00	5.00	4.00	4.50	5.00	5.00	4.10	4.70

<sup>a</sup>These hospitals are the same ones referred to in apps. II and III.

Appendix I shows average charges by hospitals and laboratories for all selected tests in all three areas.

We obtained comments from representatives of intermediaries--Medicare paying agents for hospital services--carriers, hospitals, and independent laboratories on why hospital charges were generally higher than those of independent laboratories. Their comments indicated that:

- Hospital laboratory charges are often higher to compensate for losses in other hospital departments.
- Hospitals in some cases must perform specialized costly tests not readily available from independent laboratories and these costs may be reflected in the charges for the more routine tests.
- The accounting methods used in hospitals cause hospital laboratories to absorb some hospital costs having little or no relation to the laboratories.
- Most independent laboratories perform a larger volume of automated tests.
- Hospital laboratories must often be staffed on a 24-hour contingency basis, which raises personnel costs.

B-164031(4)

--Normally hospital charges include the costs of taking samples for tests. Independent laboratories usually do not have such costs.

These comments indicate major differences in operations of independent and hospital-based laboratories which could explain why hospital laboratory charges are generally higher. Some of these differences have little or no relation to the actual cost of the service. But other differences could cause hospital charges to be lower. For example, some hospitals may be exempt from taxes imposed on laboratories operated for profit.

QUESTION 5--COST AND CHARGE DATA FOR  
HOSPITAL LABORATORIES

We examined cost reports used by hospitals to claim Medicare reimbursement, to obtain cost and charge data for the 13 hospitals. We also visited these hospitals to obtain information on their arrangements for compensating pathologists.

Cost reports examined covered various fiscal years ending in 1971 and 1972. Laboratory costs--including allocation of indirect costs, such as administrative, depreciation, and housekeeping costs--averaged about 10 percent of total hospital costs, and laboratory charges averaged about 13 percent of total hospital charges. Appendix II shows the relationship of laboratory charges to costs in the 13 hospitals. It should be emphasized that hospitals may receive less than these actual laboratory charges because under Medicare they are reimbursed on the basis of allowable costs, not on the basis of charges. Representatives of a Blue Cross plan serving part of Missouri said Blue Cross also reimbursed the hospitals for some laboratory services on the basis of allowable costs.

One hospital did not have a pathologist. Laboratory tests requiring pathologist services were sent to another hospital. In 12 hospitals the total inpatient and outpatient laboratory charges totaled \$17.2 million, including pathologists' compensation of \$2.4 million.

B-164031(4)

For the 13 hospitals the average inpatient laboratory charge per admission was \$83.50--based on total inpatient laboratory charges of about \$14.6 million and 174,900 admissions. The pathologists received an average compensation of \$11.09 for each admission.

QUESTION 6--COMPENSATION ARRANGEMENTS

Pathologists

The 12 hospitals were using the following arrangements for compensating pathologists.

<u>Arrangement</u>	<u>Number of hospitals</u>
From 20 to 30 percent of adjusted gross laboratory charges (note a)	7
Salary	4
Fee schedule (note b)	<u>1</u>
Total	<u>12</u>

<sup>a</sup>Gross laboratory charges in some cases were adjusted downward for such things as bad debts or laboratory services obtained outside the hospital.

<sup>b</sup>The pathologist was paid a specific fee for each test performed by the laboratory rather than a salary or percent of the hospital charge for the test.

At some hospitals one or more pathologists worked part time; at others, full time. Arrangements for compensation, staffing, and operating conditions were different at each hospital. We did not determine the amounts paid individual pathologists because payments were generally made to a group and we could not determine how the group distributed the money. However, the total compensation to pathologists by hospital ranged from about \$10,000 to \$369,000.

As an alternative to determining amounts paid to individual pathologists, we developed an estimated average annual compensation paid at each of the 12 hospitals for a

pathologist. From hospital records and discussions with hospital officials, we estimated the approximate number of full-time pathologists at each hospital. The number ranged from about one-half to nine and their average annual compensation ranged from about \$20,000 to \$109,000. The average compensation, by type of arrangement, follows.

<u>Arrangement</u>	<u>Number of hospitals</u>	<u>Estimated average annual compensation</u>
Salary	3	\$26,800
Fee schedule	1	90,600
Percent of adjusted gross laboratory charges	<u>7</u>	79,500
Total	<u>11</u>	

We could not estimate the average annual compensation for a salaried pathologist at one hospital. However, the maximum salary that could be paid at this hospital was \$25,000. Appendix III includes further details of amounts compensated by each hospital.

At the seven hospitals paying pathologists through percentage arrangements, about 27 percent of their laboratory costs represented this compensation. At the four hospitals paying salaries, about 9 percent of laboratory costs represented this compensation. In the hospital with a fee arrangement, such compensation represented about 33 percent of laboratory costs.

We found no relationship between amounts the hospitals paid pathologists and the hospitals' charges for laboratory services. In three hospitals, where amounts compensated pathologists averaged 29 percent of laboratory costs, charges for most of the selected tests were below the average charge for the same tests by other hospitals in the area. Conversely, in five other hospitals, where pathologists' compensation averaged only 16 percent of laboratory costs, charges for most of the tests were above the average charged by other hospitals in the area.

Some hospital officials were dissatisfied with amounts compensated under percentage arrangements. They said that, under such arrangements, pathologists benefit from the rising cost of other laboratory activities because, as charges are raised, the pathologist's income automatically increases and further increases hospital costs. They also stated that, because the Economic Stabilization Program limits increases in hospital charges, they preferred to increase charges in those departments where an increase in charges does not automatically increase hospital costs.

Nine of the 13 hospitals had not raised their laboratory charges for periods of from 2 to 8 years. Five of these hospitals had percentage arrangements, and four paid salaries or fees. In two hospitals contractual arrangements provided for pathologists to participate in establishing laboratory charges upon which their compensation was based.

A typical percentage arrangement had been recently changed in one hospital. Before the change pathologists received 20 percent of adjusted gross laboratory charges, which resulted in annual compensation of \$369,000. The pathologists now receive \$100,000 annually for supervision and management and fees for other services. The fees are 50 percent of the hospital charge for surgical pathology, 40 percent for cytology, and 17 cents for other tests. This arrangement provides greater compensation for tests in which pathologists are most heavily involved and less for those when their personal involvement may be limited.

Hospital officials and the chief pathologist said this new arrangement seemed more equitable. Hospital officials said that, although there was not sufficient experience to project the annual compensation under this arrangement, they expected total compensation to be reduced.

### Radiologists

Because arrangements for compensating radiologists were somewhat similar to those for pathologists, at your office's request, we obtained information on such arrangements at 7 of the 13 hospitals.

B-164031(4)

<u>Arrangement</u>	<u>Number of hospitals</u>
Radiologist billed patient or carrier directly--not compensated by hospital	3
Percentage of adjusted gross radiology charges	2
Fee schedule	1
Salary	<u>1</u>
Total	<u>7</u>

For the two hospitals having percentage arrangements, we obtained information concerning the number of radiologists and their combined compensation.

<u>Hospital (note a)</u>	<u>Number of radiologists</u>	<u>Combined annual compensation</u>	<u>Estimated average annual compensation</u>
I	4	\$261,052	\$65,263
L	6	585,292	97,549

<sup>a</sup>As referred to in appendixes II and III.

QUESTION 8--PATHOLOGISTS SERVING MORE THAN ONE HOSPITAL

From Medicare intermediary records we identified 21 pathologist groups, each of which served more than one hospital.

<u>Number of groups</u>	<u>Hospitals served</u>	<u>Total hospitals served</u>
7	2	14
5	3	15
3	4	12
1	5	5
2	6	12
1	9	9
1	10	10
<u>1</u>	27	<u>27</u>
<u>21</u>		<u>104</u>

B-164031(4)

Nine of the 104 hospitals are in Kansas; the other 95 are in Missouri and represent about 55 percent of the 172 hospitals in Missouri that participate in Medicare.

To determine the types of services these groups provide to hospitals and the amounts paid for these services, we obtained information from 37 hospitals in Missouri and 6 in Kansas that were serviced by 4 groups. Appendix IV shows the locations of these 43 hospitals.

Services provided and reimbursement arrangements at these hospitals follow.

<u>Type of service</u>	<u>Reimbursement arrangements</u>	<u>Number of hospitals</u>
Personal services of pathologists and services of an associated independent laboratory	Salary, or fee schedule, or from 19 to 30 percent of hospitals' charges to patients for laboratory services; fee for each test performed by associated independent laboratory	27
Personal services of pathologists in addition to laboratory equipment and personnel	From 65 to 70 percent of hospitals' charges to patients	6
Services of independent laboratory only	Fee for each test	<sup>a</sup> <u>10</u>
Total		<u>43</u>

<sup>a</sup>In eight of these hospitals, the pathologists were visiting the hospitals but were not compensated for personal services.

The following table shows the amounts paid during the most recent hospital fiscal year by the 43 hospitals for (1) the personal services provided by the 4 groups and (2) the services provided by the independent laboratories associated with each group.

Pathologist group	Number of pathologists in group	Personal services		Independent laboratory services		Total
		Number of hospitals	Amount	Number of hospitals	Amount	
A	3	3	\$ 238,215	3	\$ 115,536	\$ 343,741
B	5	5	<sup>a</sup> 337,328	5	72,878	410,206
C	7	10	395,885	10	331,704	727,589
D	<u>3</u>	<u>15</u>	<u>339,066</u>	<sup>b</sup> <u>25</u>	<u>933,616</u>	<u>1,272,672</u>
	<u>18</u>	<u>33</u>	<u>\$1,310,494</u>	<u>43</u>	<u>\$1,453,734</u>	<u>\$2,764,228</u>

<sup>a</sup>Representatives of this group said that personal fees at four of their hospitals included payment for some tests processed in their laboratories. They estimated that about 25 percent of \$167,000 received for personal services from these hospitals was for tests performed in their laboratories.

<sup>b</sup>Ten hospitals did not compensate pathologists for personal services but did receive services from their independent laboratories.

Members of two groups advised us they incurred losses on their independent laboratory activities. Another group advised us their laboratory earned a profit of about 6 percent. In some cases the independent laboratories operated by the pathologist groups charged the hospitals less than the amounts shown in their published schedules of charges.

Hospital D (see apps. II and III) had a situation which could be considered double reimbursement for laboratory services. This hospital paid the independent laboratory associated with the hospital's pathologists for tests performed in the independent laboratory for hospital patients and the pathologists received 25 percent of the hospital charge to patients for the same tests. A hospital official estimated that over a

B-164031(4)

6-year period this practice had increased pathologists' compensation by about \$131,000.

For example, during fiscal year ending June 30, 1972, these pathologists received about \$183,500 for personal services. This amount was based on 25 percent of the hospital adjusted gross laboratory charges of about \$734,000. The laboratory charges included charges of about \$100,000 for services performed in the hospital pathologists' independent laboratory plus about \$5,000 for services performed by another laboratory. In our opinion, this charge base should have excluded these amounts. Had this been done, the pathologists would have received about \$157,200 (25 percent of \$628,800), or \$26,300 less, in fiscal year 1972.

Hospital officials said they were aware of the double reimbursement aspect of the arrangement but did not change it because the total amount paid the pathologists was less than the average amount paid by other private hospitals in the area. On the other hand, this pathologist group had a similar contractual arrangement with another hospital in the area where charges for laboratory services performed outside the hospital's laboratory were excluded in computing the pathologists' compensation. The pathologists said they would consider repayment of the questionable reimbursement in a new contract they planned to negotiate with the hospital.

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We trust that this report is responsive to your request.

We plan no further distribution of this report unless copies are specifically requested.

Sincerely yours,



Comptroller General  
of the United States

APPENDIXES

COMPARISON OF LABORATORY CHARGES BY HOSPITALS  
AND INDEPENDENT LABORATORIES

Test	Kansas City area		Hospital charge higher (lower)
	Average charge		
	Six hospitals	Five independent laboratories	
Blood count	\$ 7.73	\$ 5.60	\$ 2.13
Blood sugar	4.55	3.90	.65
Urinalysis	4.46	3.45	1.01
Blood urea			
nitrogen	5.13	3.90	1.23
Cholesterol	5.90	4.90	1.00
Prothrombin time	4.38	3.25	1.13
Sodium	6.08	5.50	.58
Potassium	6.08	5.40	.68
Total protein	4.28	4.37	(.09)
Protein-bound			
iodine	5.89	5.87	.02
Bilirubin	4.90	5.70	(.80)
Pap smear	5.02	5.00	.02
Serum glutamic			
oxaloacetic			
transaminase	6.67	5.80	.87
Lactic dehydro-			
genase	7.77	5.80	1.97
Triglyceride	10.45	7.13	3.32
Sedimentation			
rate	4.75	3.40	1.35
T <sup>4</sup>	9.53	6.81	2.72
SMA-12	<u>13.33</u>	<u>14.80</u>	<u>(1.47)</u>
 Total	 <u>\$116.90</u>	 <u>\$100.58</u>	 <u>\$16.32</u>

Hospital charges  
exceeded inde-  
pendent laboratory  
charges by

16 percent

<sup>a</sup> The prices charged by the two selected laboratories in this area either were not available or were not considered representative. For this comparison we used the Medicare median customary charge for independent laboratories in the area.

<sup>b</sup> The Medicare median customary charge was not available for this test.

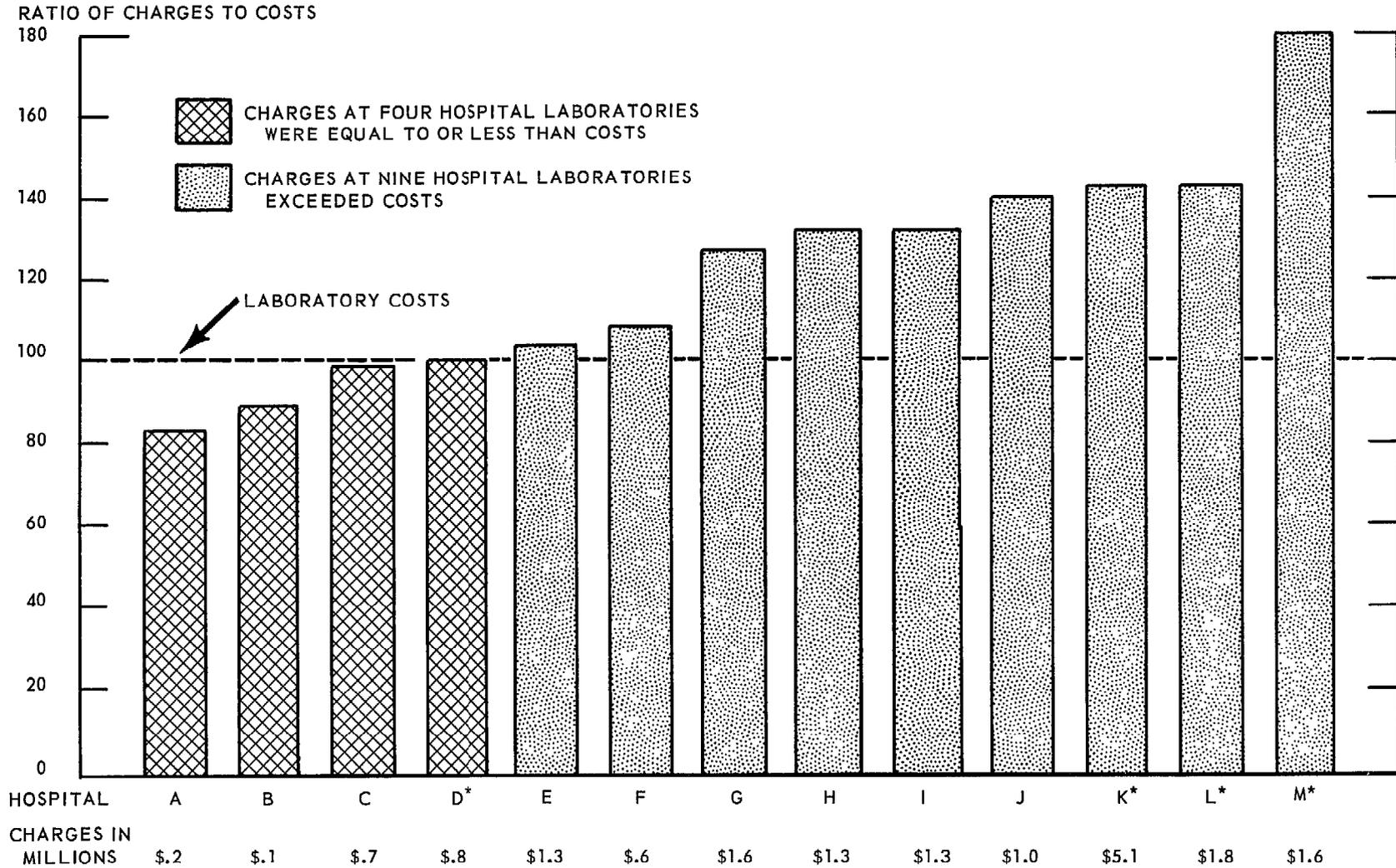
St. Louis area			Springfield area		
Average charge		Hospital charge higher (lower)	Average charge		Hospital charge higher (lower)
Four hospitals	Three independent laboratories		Three hospitals	Independent laboratories (note a)	
\$ 7.00	\$ 4.53	\$ 2.47	\$ 5.08	\$ 6.00	\$(0.92)
4.25	3.83	.42	4.00	3.40	.60
4.00	2.83	1.17	2.67	3.00	(.33)
4.00	3.83	.17	4.17	4.40	(.23)
4.75	4.25	.50	5.08	5.00	.08
4.00	3.83	.17	3.25	3.00	.25
4.50	4.70	(.20)	5.17	5.40	(.23)
4.50	4.70	(.20)	5.17	5.00	.17
3.88	4.17	(.29)	-	(b)	-
8.17	5.25	2.92	8.50	5.00	3.50
5.67	4.17	1.50	5.17	5.00	.17
6.50	5.00	1.50	5.00	5.00	-
5.50	4.20	1.30	5.17	5.00	.17
5.50	5.17	.33	5.08	6.00	(.92)
15.00	10.17	4.83	11.00	10.00	1.00
3.00	3.17	(.17)	3.08	3.40	(.32)
12.67	9.00	3.67	11.67	7.00	4.67
<u>14.00</u>	<u>12.00</u>	<u>2.00</u>	<u>15.00</u>	<u>13.00</u>	<u>2.00</u>
<u>\$116.89</u>	<u>\$94.80</u>	<u>\$22.09</u>	<u>\$104.26</u>	<u>\$94.60</u>	<u>\$ 9.66</u>

23 percent

10 percent

## RELATIONSHIP OF HOSPITAL LABORATORY CHARGES TO COSTS AT 13 SELECTED HOSPITALS

4



\* These hospitals increased their charges during calendar years 1972 and 1973.

APPENDIX III

NUMBER OF PATHOLOGISTS AND APPROXIMATE  
ANNUAL COMPENSATION AT 13 SELECTED HOSPITALS

<u>Hospital</u>	<u>Actual full-time pathologist or approximate equivalent</u>	<u>For year ended</u>	<u>Combined annual compensation</u>	<u>Approximate annual compensation for full-time pathologist</u>	<u>Arrangement</u>
A	(a)				
B	0.50	12-21-72	\$ 10,043	\$ 20,086	25% of adjusted gross charge
C	2.25	6-30-72	169,842	75,485	25% of adjusted gross charge
D	2.50	6-30-72	183,488	73,395	25% of adjusted gross charge
E	2.75	9-30-72	268,961	97,804	20% of gross charges
F	2.00	8-31-72	218,119	109,059	30% of gross charges
G	4.00	4-30-72	111,730	27,932	Salary
H	4.00	9-30-72	362,356	90,589	Fee schedule
I	3.00	6-30-72	291,976	97,325	25% of adjusted gross charge
J	2.00	12-31-72	79,061	39,531	Salary
K	9.00	12-31-72	210,924	23,436	Salary
L	6.00	6-30-72	b368,588	61,431	20% of adjusted gross charge (note c)
M	(d)	4-30-72	182,007	d25,000	Salary

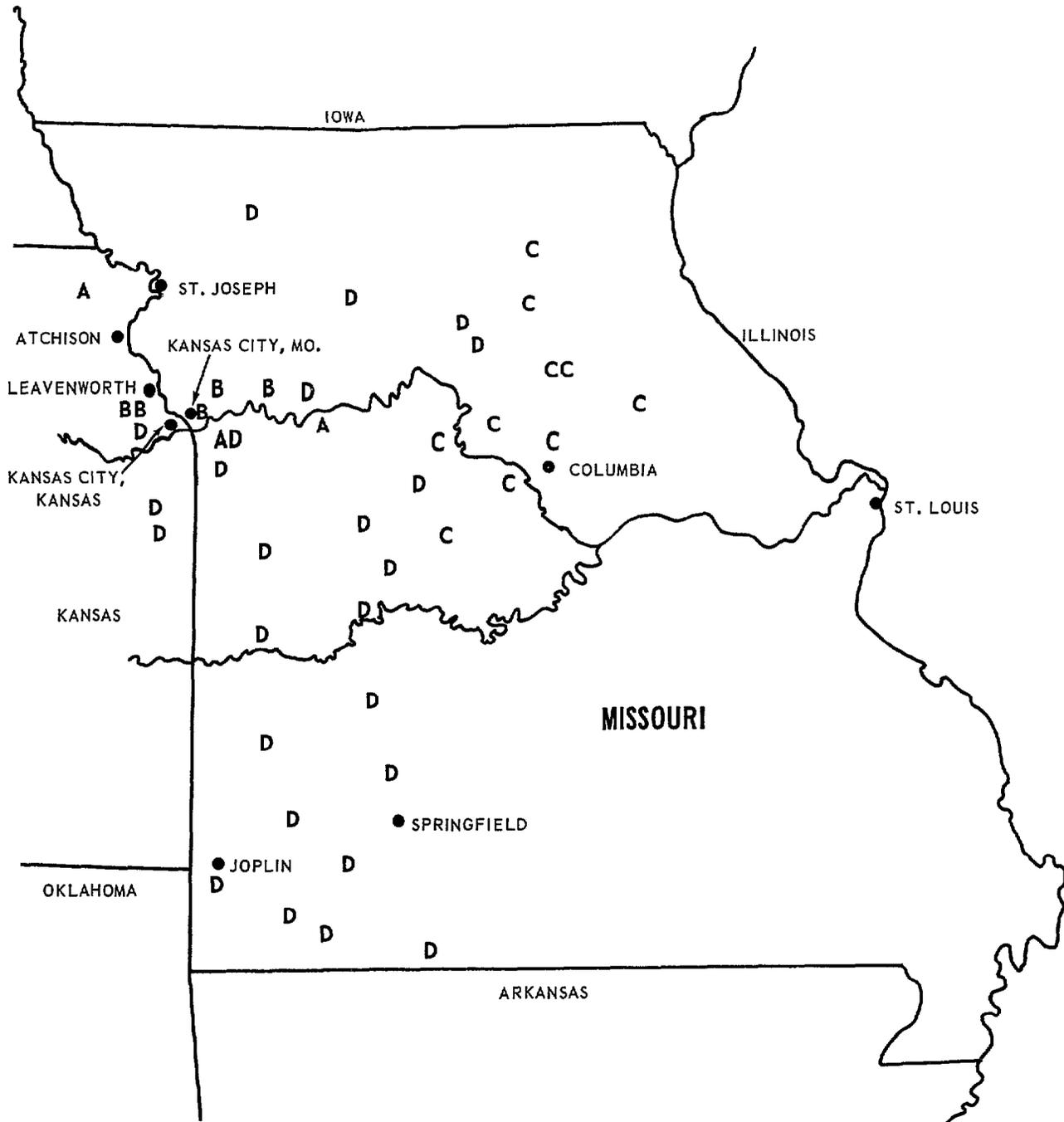
<sup>a</sup>This hospital did not retain a pathologist. Laboratory tests requiring a pathologist were sent to another hospital.

<sup>b</sup>The total was revised downward slightly to facilitate calculation of full-time equivalent.

<sup>c</sup>This arrangement changed to a fee schedule plus an annual amount for supervision and management beginning Jan. 1, 1973.

<sup>d</sup>The hospital pathologist could not estimate an approximate full-time equivalent. Therefore, we used the maximum salary that could be paid.

LOCATIONS OF 43 HOSPITALS SERVED  
BY FOUR PATHOLOGIST GROUPS



<u>PATHOLOGIST GROUPS</u>	<u>NUMBER OF HOSPITALS</u>
A	3
B	5
C	10
D	25

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